Net Zero Deforestation Zones

Annual Report FY 2013

Submitted:

November 8, 2013

NZDZ – NET ZERO DEFORESTATION ZONES

Reducing Land-use Emissions in Amazon Forests (ReLEAF)

Annual Report

OCTOBER 2012 – SEPTEMBER 2013

Under Cooperative Agreement No. AID-OAA-A-11-00046

CONTENTS

LIST OF ACRONYMS

ACAMAFRUT	Cocoa Association of Caquetá (Asociación de Cacaoteros del Caquetá)
ACCA	Asociación para la Conservación de la Cuenca Amazónica
AFIMAD	Brazil Nut Association (Asociación Forestal Indígena Madre de Dios)
AGROIDEAS	Programa de inversiones de la Dirección Regional de Agricultura
AIDER	Asociación para la Investigación y el Desarrollo Integral
ANALAC	National Association of Milk Producers (Asociación Nacional de productores de Leche)
ASCART	Association of the Tambopata reserve (Asociación de Castañeros de la Reserva Nacional Tambopata)
ASLAA	Advancing Sustainable Landscapes in the Andean Amazon
ASOHECA	Association of Rubber Growers and Reforesters of Caqueta (Asociación de Reforestadores y Cultivadores de Caucho del Caquetá)
AO	Agreement Officer
AOR	Agreement Officer's Representative
BMP	Best Management Practices
CIAT	International Center for Tropical Agriculture (Centro Internacional de Agricultura Tropical)
CONDESAN	Consorcio para el Desarrollo Sostenible de la Ecorregión Andina
CORPOAMAZONIA	Corporación para el Desarrollo del Sur de la Amazonia
CWR	Cuyabeno Wildlife Reserve
DGFFS	Dirección General Forestal y de Fauna Silvestre
DRFFS	Dirección Regional Forestal y de Fauna Silvestre
EA	Environmental Assessment
ECDBC	Colombian Low Carbon Development Strategy
Ecolex	Corporación de Gestión y Derecho Ambiental
EOT	Land Management Schemes
ETD	Environmental Threshold Decision
FENAMAD	Federación Nativa del Rio Madre de Dios y Afluentes
FCMC	Forest Carbon, Markets and Communities
FIP	Forest Investment Program
FN	Fundación Natura
FY	Fiscal Year
GHG	Greenhouse Gases
GOREMAD	Regional Government of Madre de Dios (Gobierno Regional de Madre de Dios)
GDS	Gerencia de Desarrollo Social del Gobierno Regional de Madre de Dios
GIZ	Gesellschaft für Internationale Zusammenarbeit
ICAA	Initiative for Conservation in the Andean Amazon
ICA	
IDEAM	Instituto de Hidrología, Meteorología y Estudios Ambientales
IEE	Initial Environmental Exam
IGAC	Instituto Geográfico Agustín Codazzi (Colombia)
ISU	ICAA Support Unit
KAP	Diagnostic of Knowledge, Attitudes and Perceptions
MAE	Environmental Ministry Ecuador (Ministerio de Ambiente)

MDD	Madre de Dios
MINAM	Ministerio de Ambiente del Perú
MADS	Ministerio del Ambiente y Desarrollo Sostenible de Colombia
MSAR	Madre de Dios Environmental Services and REDD+ Roundtable
MRV	Monitoring Reporting and Verification
NZDZ	Net Zero Deforestation Zones
PALSAMAD	Asociación de Palmicultores de San Juan
PDM	Municipal Development Plans
POT	Land Management Plans
RA	Rainforest Alliance
REDD+	Reducing Emissions from Deforestation and Forest Degradation plus conservation
ReLEAF	Reducing Land-use Emissions in Amazon Forests
RIA	REDD+ Indígena Amazónico
RONAP	Recolectores Orgánicos de la Nuez Amazónica del Perú
SAN	Sustainable Agriculture Network
SERVAF SA	Empresa de Acueducto de Florencia
SINCHI	Instituto Amazónico de Investigaciones Científicas
TNC	The Nature Conservancy
UNFCCC	United Nations Framework Convention on Climate Change
USAID	US Agency for International Development
USG	United States Government
USGS	United States Geological Survey
WWF	World Wildlife Fund

1 OVERALL PROJECT DESCRIPTION

The Rainforest Alliance in partnership with Fundación Natura (FN) in Colombia, Consorcio para el Desarrollo Sostenible de la Ecorregión Andina (CONDESAN), Corporación Gestión y Derecho Ambiental (ECOLEX) in Ecuador, and the Asciación para la Investigación y el Desarrollo Integral (AIDER) in Peru, are pleased to present this FY14 annual report for the period of October, 2012 to September, 2013 on the status of implementation and progress of our Net Zero Deforestation Zones (NZDZ) project, "Reducing Land-use Emissions in Amazon Forests (ReLEAF)". Our vision is that as a result of NZDZ, ***farmers and members of indigenous forest communities will significantly contribute to region-wide efforts in the Andean Amazon to achieve net zero deforestation*** through sustainably managing their agriculture and forest lands and benefitting from emerging government programs and private-sector finance that rewards these actors for the climate services their sustainably-managed lands provide.

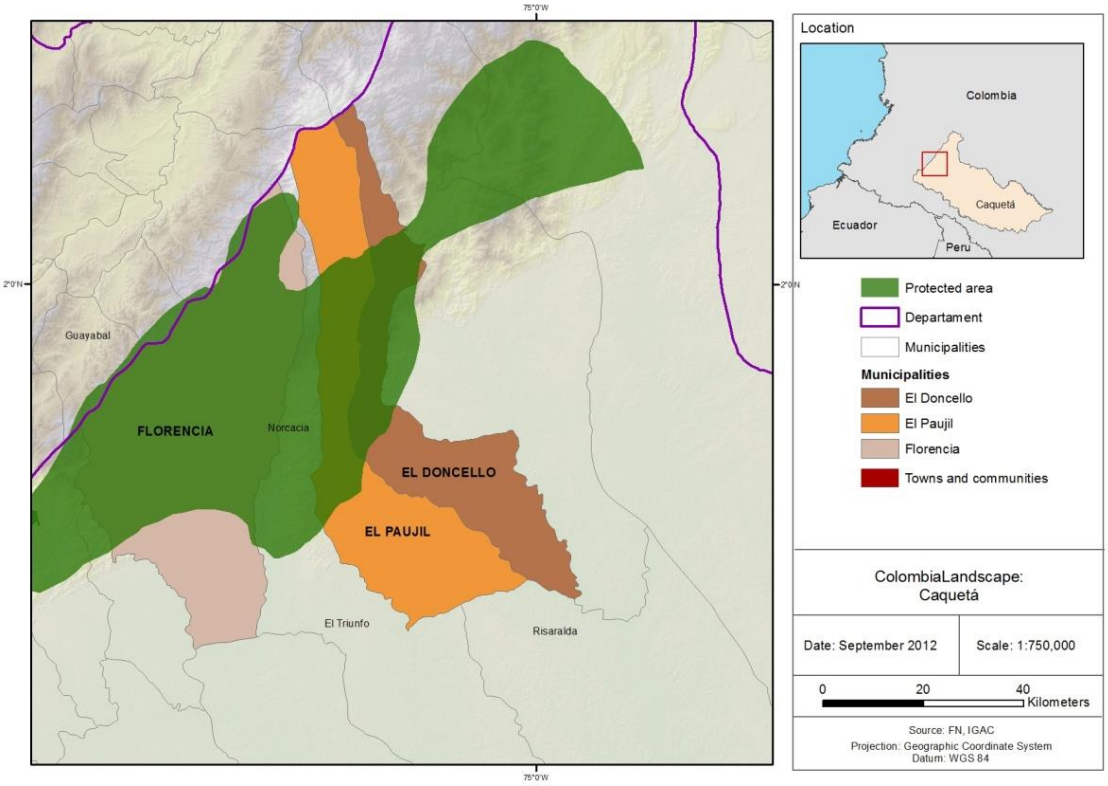
NZDZ aims to achieve the goal of ***reducing deforestation, forest degradation and Greenhouse Gas (GHG) emissions and enhancing forest carbon stocks in pilot sites within Peru, Ecuador and Colombia*** through enabling farming and forest-depending communities to benefit from and contribute to actions that conserve forests, revert degradation processes and enhance carbon stocks. Project activities are aligned under three interrelated objectives: Objective 1: Farmers, foresters, local and regional land managers and government agencies reduce deforestation and mitigate climate change by adopting and implementing sustainable forest and land management. Objective 2: Community-based forest monitoring system is established whereby forest and agricultural communities with forested lands can achieve and contribute to monitoring, reporting and verification of greenhouse gas emissions and removals. Objective 3: Stakeholder and institutional capacity is built for regional and national REDD+ systems that reward sustainable land management as a scalable platform to combat deforestation and climate change.

These objectives are closely interrelated by design to maximize impact and sustainability through working in priority landscapes to demonstrate best practices on the ground (Objective 1), quantify the climate impacts of those practices (Objective 2), and engage policymakers and the private sector to recognize and include these accomplishments in emerging REDD+ roundtables, other government incentive programs, and zero-deforestation value chains (Objective 3).

2 GEOGRAPHIC CONTEXT

Caquetá Landscape

Project activities in the Department of Caquetá focus on the western region, including the rural zones of the municipalities of Florencia, El Doncello and El Paujil and bounded by the municipalities of Morelia, Puerto Rico and Montañita. Deforestation is driven primarily by expansion of the agricultural frontier due to poorly managed conventional production systems, principally extensive cattle ranching that degrade soil and forage resources from year to year. Project interventions in Caquetá prioritize restoration and reforestation of lower-altitude regions of a broad "degradation belt" that transects Caquetá. These areas have already suffered extensive deforestation and have largely been converted to unsustainable ranching activities. Thus by reverting degradation processes, we hope to impact broader degradation and deforestation dynamics in this landscape.

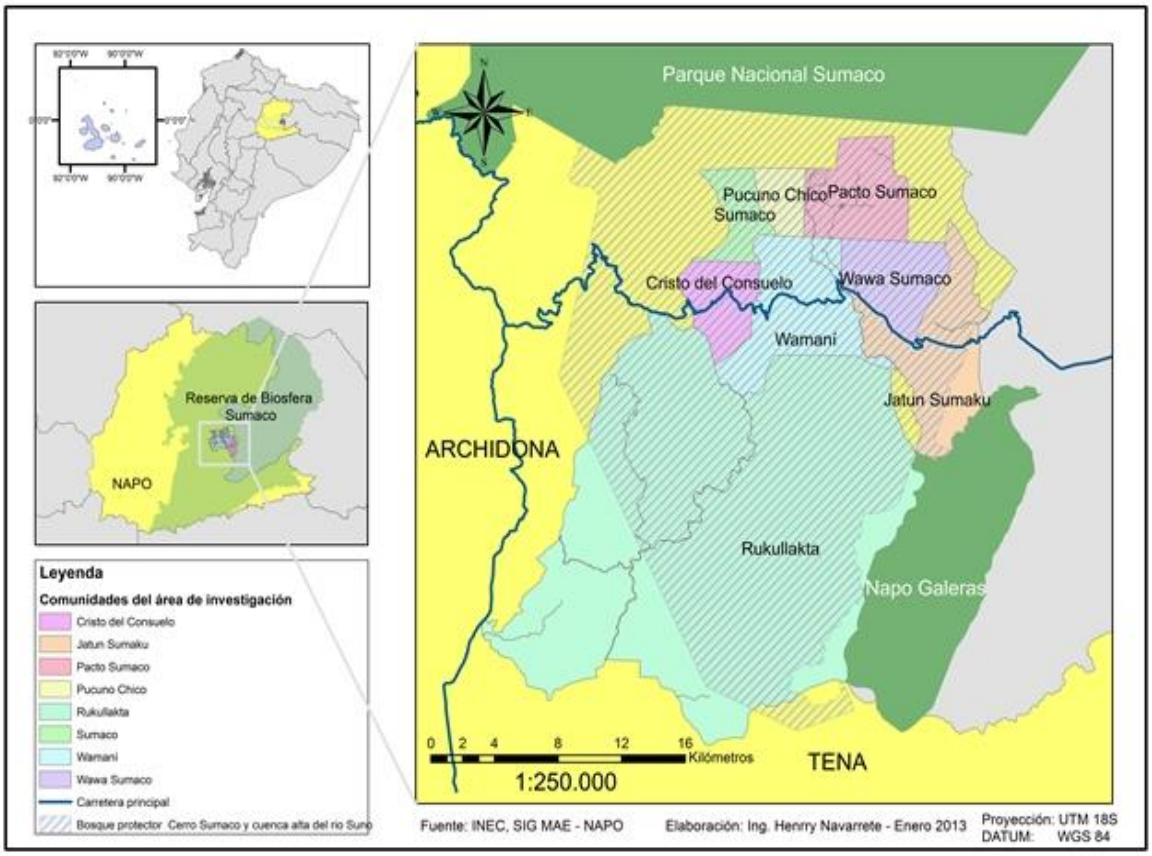


Napo Landscape

The NZDZ project is implementing activities in the community of Wuamaní located in the newly established parish of Hatun Sumaco, in the Canton of Archidona in the Napo Province. The parish is located in the Sumaco Napo-Galeras National Park buffer zones, the Sumaco Protected Forest, and the Sumaco Biosphere Reserve.

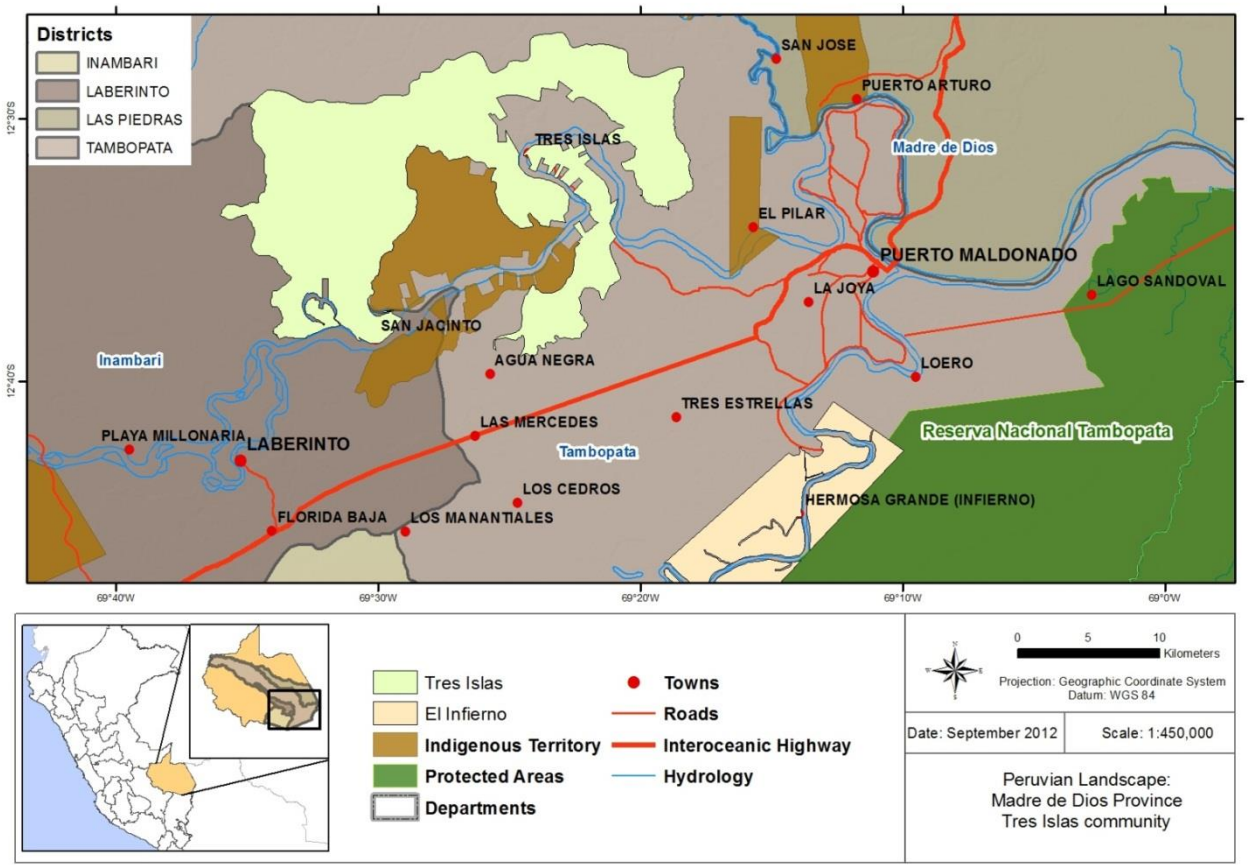
In this landscape, deforestation and degradation processes are driven by a range of factors including agricultural frontier expansion, primarily related to Naranjilla (Solanum sp.) production, lack of capacity or market opportunities to implement sustainable management practices for forest and non-timber forest products, and illegal logging. Project interventions are designed to address these threats through interrelated activities that will improve forest management and pursue income-enhancing opportunities through access to the Socio

Bosque and MAGAP reforestation incentives programs and sustainable private sector value chains.



Madre de Dios Landscape

The Tambopata province in the Madre de Dios region includes several indigenous communities located along the Tambopata River and its tributaries. The two communities we are working with are Tres Islas and Infierno, Tres Islas with 217 habitants and 32,000 ha, and Infierno with 9,500 ha and approximately 600 habitants. Deforestation and degradation in the two communities are driven by expansion of the agricultural frontier and illegal encroachment for artisanal mining practices. Project interventions address these threats through introducing improved timber and non-timber forest management practices and delivering dedicated technical assistance, training and other capacity building to implement such practices, as well as – in alignment with ICAA II working at the community-level to enhance communal management and land use planning.


Districts
INAMBARI
LABERINTO
LAS PIEDRAS
TAMBOPATA
SAN JOSE
PUERTO ARTURO
Madre de Dios
TRES ISLAS
EL PILAR
PUERTO MALDONADO
LA JOYA
LAGO SANDOVAL
SAN JACINTO
Inambari
AGUA NEGRA
LOERO
TRES ESTRELLAS
LAS MERCEDES
PLAYA MILLONARIA
LABERINTO
Tambopata
Reserva Nacional Tambopata
LOS CEDROS
HERMOSA GRANDE (INFIERNO)
FLORIDA BAJA
LOS MANANTIALES
12°30'S
12°40'S
69°40'W
69°30'W
69°20'W
69°10'W
69°0'W
Tres Islas
El Infierno
Indigenous Territory
Protected Areas
Departments
Towns
Roads
Interoceanic Highway
Hydrology
0 5 10
Kilometers
Projection: Geographic Coordinate System
Datum: WGS 84
Date: September 2012
Scale: 1:450,000
Peruvian Landscape:
Madre de Dios Province
Tres Islas community

3 OPERATING CONTEXT AND CROSS-CUTTING THEMES

3.1 Operating Context

In this section we identify the primary challenges faced in FY13, as well as those which we anticipate may continue to impact implementation over the life of the project. In response to these changing local conditions, to ensure achievement of the anticipated results, we intend to apply adaptive management principles and to be responsible and flexible to adjust activities in the face of new information. We also summarize the planned or completed actions taken to mitigate the challenges faced.

3.1.1 Challenges and Adaptive Management

1. Security concerns are an ongoing challenge in Caquetá, Colombia: the region has the highest presence of FARC guerrillas in Colombia and they have an active presence within the project landscape. While local partner FN has a strong presence in the region and a history of successful work in Caquetá, we are closely monitoring security issues and taking adaptive management measures as necessary. We have relocated approximately 12 pilot farm sites from a higher-risk area of the project landscape in Caquetá to lower-risk and more promising locations in the Piedemonte. (Since late August there has been an agrarian strike in Caquetá. Many of our project beneficiaries are participating in the strike, which has impeded us from executing field activities with these producers.) In the municipality of Paujil we have been able to continue to execute some training and technical assistance work; however we have had to put on hold fieldwork in El Doncello and Florencia, which is causing delays in completion of certain project activities. As the agrarian strike continues, we are prioritizing advancing in work under project goals 2 and 3 that do not require field-based activities. Moreover, we are identifying alternative strategies to execute activities in the field if the strike does not conclude. (C.C.2)
2. Current departmental and municipal plans favor incentivizing and up-scaling sustainable ranching activities, however these plans will expire in the next 1-2 years and there is a risk that the incoming administration charged with designing the next phase of plans will not prioritize sustainable cattle ranching. The most viable means to reduce the risk of a shift in government planning priorities of the incoming Alcaldias is to: a) capitalize on the existing opportunities to demonstrate how to apply current incentive models; b) achieve successful pilot implementation, thus proving the value of the model to support forest conservation, avoid degradation and enhance producer livelihoods; and c) build collaboration agendas with civil society and existing administrations to advance the model – including through engagement in regional and national REDD+ planning efforts. We are tailoring objective 3 activities to execute these strategies, and in so doing aim to respond to this challenge and capitalize on opportunities.
3. Among the most important challenges we are facing in Ecuador is the adaptation of the NZDZ project to the Napo landscape's socio-environmental dynamics (e.g. language, indigenous peoples). This change is in response to the recent increase in civil unrest in the Sucumbíos area, which increased the risk of danger to project staff, and reduced the probability of the project conceptual model functioning as designed. Our strategy to advance and recuperate from delays in project implementation is to complement ongoing initiatives promoted by different institutions at the provincial and national level, in

Hatun Sumaco Parish and communities. For instance, align activities with GIZ and FARO group to improve the functionality of the Napo forest roundtable, and collaborate with the MAGAP's and SocioBosque's new and existing incentives programs.

4. In Ecuador we will help catalyze the design and implementation of agroforestry and timber systems, however due to the establishment period required by tree-based systems their impact cannot be quantified immediately. Therefore values attributable to Indicator 1 will be projections that presuppose numerous, typically unpredictable, variables. Nonetheless the team has generated relatively conservative projections of the 20-year impact of these systems in terms of their carbon sequestration potential.
5. Defining collaboration with the Ecuadorian government to support their REDD+ preparation has been challenging due to changes in the MAE administration and delays in establishing the Ecuador REDD+ roundtable. Our strategy to advance coordination with MAE and the PNC UN REDD in defining our collaborative framework in terms of policy incidence has been to be proactive and align our program to support their needs. Our participation in the Ecuador REDD+ roundtable as technical advisors was recently accepted, allowing us to define the scope of our technical assistance to the PNC-ONU-REDD in regard to the safeguard information system. Currently we are part of two technical commissions and since July we have advised the Sub-secretariat of Climate Change and UN-REDD Program to inform the design of the REDD+ Registry and Safeguards Information Systems.
6. In November 2014 Madre de Dios will hold regional elections, which could interfere with the planned initiatives by MSAR for REDD+. To minimize impacts of GOREMAD´s staff turnover due to the 2014 electoral process, we have identified the following strategies for the short and medium term: a) identify key officials with little chance of rotation and strengthen their capabilities in climate change, REDD+, and safeguards; b) ensure that the safeguards commission has a solid plan and a roadmap to define its work in 2014-2015 c) capitalize on existing opportunities of joint coordination between the MSAR and the MINAM and promote the hiring of the staff that link regional activities with the national strategy for REDD+ similar to the situation in San Martin.
7. Currently, there is a disarticulation between the various initiatives that promote the strengthening of REDD+ capacities in the region, including the Madre de Dios Regional Government, indigenous organizations (FENAMAD) and its REDD+ Indígena Amazónica (RIA) proposal and NGOs. To address this, given the lack of a common agenda and joint interests and strategies among different sectors in the region it is necessary to promote the following at the level of the MSAR and safeguards commission: a) a mapping of the actors involved in REDD+; b) identify training needs of the various stakeholders, c) promote joint efforts of NGOs with MINAM for capacity building for REDD+ in the region, d) homogenization of discourse on REDD+ among institutions that are implementing REDD + activities (e.g. pilots and project developers).

3.2 Cross-cutting themes

3.2.1 Collaboration Achievements

- We are coordinating with a host of key actors including WWF, MADS, and others, in Caquetá through engagement and participation in the nascent Nodo de Cambio Climático. Through our participation we aim to set a common work agenda for the Nodo and capitalize on collaboration opportunities.

- We participated in a July workshop convened by MADS and the Caquetá Government to define how MADS can execute its planning objectives through Caquetá departmental plans, and operationalize these through various ongoing programs and projects in the region. Other participants included: INCODER; Corpoamazonía, Instituto Sinchi, IDEAM, Incoder, IGAC, Unidad de Consolidación Territorial, Fundación AVINA, TNC, ACT Corporación, and MISIÓN VERDE AMAZÓNICA. Next steps include establishing a common work agenda and articulating the activities of different groups active in sustainable ranching in Caquetá with regional government planning efforts.
- We are pursuing an agreement with CORPOAMAZONIA that would enable our producers to receive trees and energy-efficient stoves, both important contributions to enable them to implement low-emissions cattle management systems and contribute to net-zero deforestation.
- We are pursuing an agreement with ICA that would enable our producers to receive technical assistance and facilitate certification against the Colombian BPM Ganaderas scheme, which would automatically qualify them for a price premium of 15 pesos per liter of milk sold.
- In the Napo province we are holding an array of strategy sessions and planning meetings with a host of key actors including MAE in Napo, GIZ Ecuador, FARO group, and Gobierno Autónomo Descentralizado de la Provincia de Napo and relevant actors in the forestry sector at national and regional level to share agendas and develop an action plan for synergies in the implementation of project activities in the Napo region.
- At the national level in Ecuador we were accepted to be part of the Mesa Técnica REDD+. In the scope of this the Secretariat for Climate Change of the Ministry of Environment and the National Joint Programme UN-REDD requested our participation in the generation of pilots for safeguards monitoring to support the work that is taking place in PNC identifying safeguards for REDD +.
- We participated in a national workshop convened by MAE and PNC ONU REDD for the identification and prioritization of multiple benefits for REDD+. Next steps are to hold a series of technical meetings to provide support to the discussion on social and environmental benefits that may flow from REDD + activities in Ecuador.
- We are coordinating with the MAGAP incentive program to support communities to access its benefits. This incentive will be applied to the establishment of agroforestry and reforestation systems.
- In the Madre de Dios region, we continued coordination with Gerencia de Desarrollo Social, Gerencia de Recursos Naturales, FENAMAD, WWF, DAR, SPDA among other relevant actors in the forestry sector for implementing activities based on MSAR safeguards committee's capacity building work plan.
- We developed synergies with ACCA, so that the community of Tres Islas prioritizes the updating of Brazil nut land arrangement. We will provide a continuous technical support to the Brazil nut committee to update this arrangement.
- Formation of the Brazil nut value chain formed by the company CANDOR Peru in association with AFIMAD. This value chain will provide Brazil nut from Peru to the Costco supermarket in the United States.
- We convened coordination meetings with TNC to explore how to coordinate efforts to replicate our cattle ranching models with a set of producers they are also working with, and develop unified positions to engage in the Nodo de

Cambio Climático. We will share our respective project work plans to identify further synergies, and design activities to reinforce these.

- We are coordinating with TNC to hold an experience interchange workshop among the different landscapes in which NZDZ operates in the three countries.

3.2.2 MRV Standardization

We continue promoting coordination to ensure that country teams in Colombia, Ecuador, and Peru actively collaborate to harmonize their respective approaches to community-scale MRV. To systematize lessons learned from monitoring systems, we are developing an analytical document that compiles the tri-national approach for community MRV, the productive strategies in each landscape, an analysis of the MRV as a tool for land management decisions, and present the cases of Peru, Ecuador and Colombia.

3.2.3 Gender

During this period, we increased our capacity and knowledge of gender and climate change, and how to develop a gender analysis of project activities and a gender strategy. We achieved this through eight workshops with project staff and beneficiaries. The exercise enabled us to both identify existing activities supporting gender equality and others with potential for doing so. Some examples of what we accomplished over the past year are summarized below.

- In May and August in the municipality of Florencia, we worked with 30 producers to identify opportunities to support gender mainstreaming in local cattle management systems. We identified tree nursery management and milking as two potential opportunities to align women's labor priorities with farm management needs. We are evaluating other opportunities and aim to align farm implementation plans and subsequent training with results, to facilitate adoption of recommendations to improve gender mainstreaming.
- In Ecuador, we had 300 participants in our training events with an average participation of 45% of women, which included technical topics such as best management practices for agriculture and the government economic incentive programs.
- In Peru, to try to address the low female turnout in trainings related to forest management techniques and climate change issues, we encouraged the participation of four females (out of 9) in the exchange visit to Ucayali.

4 ENVIRONMENTAL COMPLIANCE

To address potential unmitigated impacts on biodiversity and the environment when best management practices are not sustained by local farmers and foresters beyond the life of the project, in accordance with the mitigation measures included in the EA, in Peru we have finalized guides on sustainable palm harvesting (aguaje and unguraje), and are in the process of developing training materials for low impact logging. In the meantime our field training in BMPs is constant.

In regard to implementing the suggested mitigation measure for ensuring project activities do not cumulatively impact already overwhelmed environmental governance institutions, we have been providing technical and logistical assistance to the regional forestry division of MDD. In terms of carrying out a deeper analysis of the division's challenges in supervision, monitoring, and evaluation of BMPs, the high rate of turnover within the entity has been an obstacle for advancement. To address this, we will continue to work with the authorities in charge, while maintaining steady engagement with lower level technical staff so as to not overburden them with responsibilities.

We also updated the EA with the information related to the new intervention area in the Napo Province. Since the activities essentially remain the same, we concluded that no additional mitigation measures were required.

5 ACHIEVEMENTS

5.1 Tri-national level

We made the following advances toward sharing approaches across the three project landscapes to enable cross-boundary knowledge sharing, maximize project results, and deliver NZDZ as a common, unified initiative across the Andean Amazon:

1. We began preparation for a technical workshop to exchange experiences in the development of MRV systems in coordination with SilvaCarbon and FCMC and the governments of Peru, Colombia, and Ecuador.
2. At the end of October in coordination with the MINAM, REDD+SES secretariat, CI and WWF, we will carry out a three day workshop in Puerto Maldonado that aims to ensure knowledge-transfer and sharing lessons learned from REDD+ SES experiences in San Martin, Acre, and Ecuador.
3. We developed a comprehensive framework for the analysis of implementing safeguards through REDD+ SES standards in Madre de Dios which aims to inform GOREMAD and FENAMAD on safeguards in general and specifically how REDD+ SES can provide important inputs at the sub-national level. This material will be disseminated and used for the sessions in the workshop en Puerto Maldonado. In Ecuador, we are developing content for a policy brief on potential contribution of the FSC standards to the REDD+ national information system in Ecuador. Finally, in Colombia we initiated the development of a policy brief to underscore the challenges and opportunities to establish integrated, holistic pasture management systems in Caquetá and the Colombian Amazon more broadly as a replicable strategy to support low-carbon, sustainable rural development and reduce deforestation pressures in the region

5.2 Caquetá Landscape, Colombia

In FY13, we laid the foundation for sustainable, low-carbon land management, enhanced forest conservation, and avoided degradation on over 8,000 hectares in the municipalities of El Doncello, Paujil and Florencia. We achieved this through the participatory design of over 120 farm maps and implementation plans, and conducting training and technical assistance on their implementation to all project producers. Moreover, we developed and validated the participatory monitoring and MRV tools that will be used to evaluate project impacts in reducing degradation and enhancing forest carbon as well as evaluate key socioeconomic factors such as productivity improvements. A project baseline was established in summer, 2013. Last, we have refined the project's political incidence strategy to maximize its probability of delivering concrete economic incentives to producers within life of project as well as alignment with municipal, departmental and regional development plans/strategies. We laid the foundation for doing so through ongoing engagement with project municipalities, the new regional Nodo de Cambio Climático, and by identifying several local incentives and building collaboration agendas to facilitate producer access to these. We will expand on these achievements in FY14 to fully implement the sustainable ranching model in the 30 pilot farms, create conditions for its adoption in all 200 farms, strengthen collaboration agendas with key regional actors, and deliver economic incentives to participating producers.

5.2.1 Goal 1: Local and regional land managers, communities and government agencies contribute to net zero deforestation and mitigate climate change by adopting and implementing sustainable forest and land management

Under goal 1 in Colombia, accomplishments include:

1. We produced participatory farm maps for each ranch in the three municipalities, totaling over 120 maps. Often done with the entire family, these maps are crucial management tools to enable farmers to appreciate the full value of their farmland (e.g. water provision, forest cover, etc.), identify problems that their ranching is causing to those environmental values, and project a vision for their future, sustainable farm management system.
2. Building on these maps, we designed over 120 implementation plans to enable BMP adoption and reduced degradation on over 8,000 hectares of farmland in the region. These plans define the steps and recommended practices farmers should implement in order to achieve their sustainable management system. Through FY14, we will provide dedicated, one-on-one technical assistance to each rancher to support implementation of his/her plan.
3. In alignment with priorities established in implementation plans, we trained over 300 local ranchers in best cattle management practices to reduce emissions and minimize forest degradation through hosting a series of training workshops in the Florencia, Paujil and El Doncello municipalities. We enhanced farmer capacities on water and ecosystem conservation, waste and fertilizer management and sustainable pasture management issues – priority topics that we had previously defined through conducting participatory farm diagnostics. Building local competencies in these topics will enable our producers to implement the models for sustainable cattle ranching that we have designed and planned with them. In FY14 we will expand training topics to rotational pastures, reforestation, and tree sapling management, to enable producers to successfully implement low-carbon management practices that will result in reduced forest degradation and enhanced carbon stocks.
4. Between June and August, we delivered pilot trainings to 550 producers, farm leaders and municipal technicians on climate-smart ranching practices, based on the Sustainable Agriculture Network's Climate Module. The training reinforced other sustainable ranching training events by providing ranchers with an understanding of the importance of their ranching activities on Caquetá's forest and water resources as well as ranching's contribution to global climate change. We trained farmers to estimate the GHG emissions impacts of their farming practices through conducting biomass measurements in pasture, primary and secondary forest areas, and through using the Cool Farm Tool – a farmer-friendly GHG emissions calculator – to help them understand their relative emissions from fertilizer, land-use change, water consumption and other farm inputs to their overall farm emission footprint. Such training is important because it enables farmers to understand the causal relationships between extensive ranching and climate change, as well as building their capacity to participate in project MRV activities.
5. Since June, we lost participation of 30 farms that lacked interest in project activities or were located in areas too dangerous to work in. Currently we have a total of 170 farms. We have provided targeted, technical assistance visits to all 170 farms on a monthly basis. The goal of these visits is to reinforce training provided through formal workshops and ensure that farm management plans are appropriately implemented. We do this through advising farmers on how they should implement certain BMPs, help them interpret their farm maps, and help resolve issues they may

have with such issues as livestock health. In FY13, we conducted over 50 technical assistance events in improving the management capacities and supporting sustainable natural resource management in over 8,000 hectares in the municipalities of El Doncello (4,189 ha) and Florencia (6,707 ha). In FY14, we will implement this model of continuous technical assistance visits in Paujil.

6. We have laid the foundation for successful implementation of reforestation activities in the 3 project municipalities by establishing agreements with 4 local community tree nurseries to supply tree seedlings/saplings to NZDZ producers. Moreover, we identified the native species suited for use in the region that we will cultivate in the nurseries and grow on farms. Laslyt, we have initiated negotiations with a variety of reforestation companies active in Caquetá to maintain the productivity of the nurseries in the future and facilitate replication and up-scaling of reforestation activities beyond the life and scope of the NZDZ project. This progress helps us alleviate a critical constraint to many sustainable ranching projects operating in Caquetá – a lack of high-quality and consistent supply of saplings.

5.2.2 Goal 2: A participatory forest monitoring system is established whereby forest and agricultural communities with forested lands can achieve and contribute to monitoring, reporting and verification of greenhouse gas emissions and removals

Under goal 2 in Colombia, accomplishments include:

1. We developed the protocols to monitor and measure carbon impact of project interventions in aboveground biomass and soils, based on national and sub-national protocols developed by IDEAM. We validated the protocol in the field and utilized it to establish the project baseline. The protocol also includes socio-economic criteria such as reduction of costs of production, increase in quality of milk and increase in weight of cattle, to measure the impacts of the project on-farm productivity and other social issues. Looking ahead, we will conduct training to enable producers themselves to collect and manage data for these socioeconomic indicators, to support their adaptive management of production activities.
2. We established the baseline for aerial biomass and soil carbon stock to estimate carbon impacts of project interventions in the Caquetá landscape. The baseline covers 3,024 hectares representative of the project area and is the foundation against which the efficacy of sustainable ranching management interventions to revert degradation tendencies and enhance regional forest cover will be measured.
3. We quantified the NZDZ project benefits in terms of their carbon sequestration potential. For this we focused on expected impacts in terms of tons of CO2 after 1 year of growth (year 3 of the project). We expect to sequester 347 tons of CO2 during the life of the project in the Caquetá landscape. For more details on the assumptions behind these projections please refer to Annex 1.

5.2.3 Goal 3: Promote lessons learned and key strategies of project activities through capacity building and support to national and regional REDD+ strategy development

Under goal three in Colombia, accomplishments include:

1. We are actively engaged in the design and establishment of the Climate Change Node for the Amazon Region (Nodo de Cambio Climático para la region amazonica). We participated in the Node's inception workshop, and have been

encouraged by MADS to contribute to setting the work agenda for this nascent regional forum which is charged with identifying REDD+ and climate change priorities and articulating its agenda with Colombia's national-level REDD+ work program. This forum will be a key space to disseminate project accomplishments and a vehicle with which to embed our sustainable ranching model within a broader agenda of regional climate change activities.

2. We have initiated discussions with municipalities of El Doncello and Paujil to define how to operationalize local incentives built into municipal and departmental plans to reward sustainable ranching that reduces deforestation and conserves forestlands. Specifically, we are working to enable NZDZ producers to access mandatory price premiums for milk quality and access tax exemptions for forest conservation efforts. In the coming months we will define the means through which we can enable local municipalities to verify our producers´ compliance with the tax exception agreement 012-30, which will enable producers to receive approximately 125 USD in tax reductions through their reforestation and forest conservation activities. This is one example of the tangible conservation incentives we aim to achieve for our producers to facilitate implementation of the sustainable ranching model.

5.3 Napo Landscape, Ecuador

In fiscal year 2013, due an increase in civil unrest in the project area that increased the risk of danger to project staff and reduced the probability of the project conceptual model functioning as designed, we were obligated to move the project intervention area to the Napo province. This caused some delays in project implementation, particularly regarding activities under objective 1. However, we managed to quickly adapt project activities to the new landscape, and developed a solid partnership with the Wuamaní community in Napo province, which should allow us to quickly get back on track to meet project outcomes and objectives. We will help catalyze the design and implementation of agroforestry and timber systems, by means of the MAGAP incentive program. We will assist local farmers in the design, implementation, and monitoring of these systems in order to successfully meet the requirements established by MAGAP while also establishing forestry systems that could deliver important livelihood benefits. Also, we are developing strategies to promote conservation on 1200 hectares of Socio Bosque and reduce degradation on over 5,000 hectares in the community of Wuamaní. For this, we have conducted training for community members on the SAN best management practices and climate module. Moreover, we developed and validated the participatory monitoring and MRV tools, and finishing collecting data for the project baseline in September. We quantified 42.4 tons of CO2 as the amount of carbon sequestration potential in terms of tons of CO2 after 1 year of growth. Finally, we have built collaboration and defined the project's political incidence strategy through ongoing engagement with the Sub-secretariat of Climate Change and UN-REDD Program to inform the design of the REDD+ Registry and Safeguards Information Systems.

5.3.1 Goal 1: Local and regional land managers, communities and government agencies contribute to net zero deforestation and mitigate climate change by adopting and implementing sustainable forest and land management

Under goal 1 in Ecuador, accomplishments include:

1. Since April, we completed the process of socialization of the scope and objectives of the project in the communities of the Parish Hatun Sumaku and signed a Memorandum of Understanding with Wuamaní. Some of the activities we have

begun or will implement include supporting the creation of the naranjilla limpia roundtable, promoting better agricultural and sustainable forest management practices, updating management plans, capacity building in organizational issues, etc.

2. We received MAE´s accreditation to train indigenous communities in REDD+ issues. Six team members, including the vice-president of the community of Wuamaní, were trained in MAE´s methodology for capacity building in climate change and REDD+ with the use of materials that the Ministry of Environment has developed for this purpose and now have the endorsement of the environmental authority.
3. We identified and trained stakeholders to implement activities to improve cocoa and naranjilla productive systems in Wuamaní and strengthen and improve their organizational capacities by promoting the SAN and the climate module standard. Forty-seven producers from Wuamaní and other communities of Hatun Sumaco, and 54 local technicians from different institutions linked to agriculture participated.
4. Following the example of the small group of organic naranjilla producers in Wuamaní, we supported the establishment of the "naranjilla limpia" roundtable. The initiative seeks to promote sharing experiences with best management practices with other producers in the Napo region, among other things. Through a strategic planning exercise, we helped the roundtable identify potential areas of action, and we initiated a consultancy to characterize the existing practices in Wuamaní and in general in the region, as well as carry out a value chain analysis to identify potential intervention activities.
5. We requested permission to operate as a technical advisor to the NZDZ and ICAA communities interested in the Ministry of Agriculture-MAGAP incentive program. This program reimburses the costs of reforestation and establishment of agroforestry systems up to 100% to communities, and thus we will focus on restoring degraded areas in FY14, while utilizing the program to increase the sustainability potential of the intervention. Wuamaní has communicated its program work plan to its members and we are now registering interested farmers.

5.3.2 Goal 2: A participatory forest monitoring system is established whereby forest and agricultural communities with forested lands can achieve and contribute to monitoring, reporting and verification of greenhouse gas emissions and removals

Under goal two in Ecuador, accomplishments include:

1. The main achievements of the period are the consolidation of the methodological proposal to implement a locally-based carbon monitoring system, and the implementation of field activities to gather the data needed for the carbon baseline according to the specifics of the new study area. Data gathering was conducted in each farm with the participation of a group of youth, women, and adults in Wuamaní. For the baseline 40 permanent plots were characterized in forest and non-forest land use/land cover strata following the methodological proposal. A major achievement is the inclusion of a rigorous process of species identification at the plot level, which is expected to generate robust carbon estimations and provide better understanding of the links between carbon sequestration, forest management and biodiversity in the study area.
2. We quantified the NZDZ project benefits in terms of their carbon sequestration potential. For this we focused on expected impacts in terms of tons of CO2 after 1

year of growth, year 3 of the project. We expect to sequester 42.4 tons of CO2 during the life of the project in the Napo landscape. For more details on the assumptions behind these projections please refer to Annex 1.

5.3.3 Goal 3: Promote lessons learned and key strategies of project activities through capacity building and support to national and regional REDD+ strategy development

Under goal three in Ecuador, accomplishments include:

1. Our participation in the Ecuadorian REDD+ Roundtable was finally approved by MAE. This space is a formal platform for dialogue, and participation for the preparation process and future REDD+ national strategy implementation. As part of this, we participated as technical advisers in the review of the REDD+ Registry and Safeguards Information systems.
2. As part of our coordination with PNC UN REDD+, MINAM, ISU, REDD+ SES secretariat, and Conservation International we will help facilitate and participate in a workshop to exchange experiences in Safeguards Information systems for REDD+ in Lima in October 2013. The workshop has the following objectives: a) share experiences in developing information systems safeguards, and b) analyze approaches and perspectives in monitoring and evaluation of social and environmental safeguards. Government officials of Acre, Brazil, Colombia, Costa Rica, Ecuador, Mexico, Guatemala, Honduras, Chile, Paraguay, and Peru will participate.

5.4 Madre de Dios Landscape, Perú

NZDZ strengthened the capacities of local land managers in Madre de Dios to implement sustainable forest and NTFP practices as elements of integrated strategies to avoid deforestation by ensuring communities can avail themselves of sustainable economic alternatives. Specifically, we fostered the development of a timber committee in the community of Infierno that will support Infierno in improving their forestry harvesting and production practices. Moreover, we trained over 800 community members in reduced impact logging, timber harvesting and other related practices. We completed critical milestones in the development of monitoring and measuring protocols to quantify the carbon impacts of these and other practices by competing a post-deforestation biomass inventory – with the participation of local landowners – and calculating carbon content per land-use strata in the community of Infierno. These analyses form the backbone of the carbon accounting and measurement that will occur to quantify (and later commercialize) carbon stocks associated with the Infierno REDD+ project. Last, over the course of FY13 NZDZ staked out a leadership position in MDD on REDD+ safeguards policy and program design; we provided ongoing technical assistance to the MSAR to improve the Safeguards sub-commissions workplan, hosted a series of consultative workshops and meetings to share information and improve the quality of discourse on social and environmental safeguards, completed a policy brief on the subject, and are working to proactively engage FENAMAD in the REDD+ and safeguards discourse, to identify the means for them to most constructively reflect their needs and priorities within the emerging safeguards and broader REDD+ policies and programs. Collectively, these activities lay the foundation for diversifying incomes of local

indigenous communities under the scope of pioneering REDD+ projects based on sustainable land management, while also ensuring their perspectives, needs and priorities are considered in the design of subnational and national REDD+ programs.

5.4.1 Goal 1: Local and regional land managers, communities and government agencies contribute to net zero deforestation and mitigate climate change by adopting and implementing sustainable forest and land management

1. We supported the consolidation of a timber committee in the community of Infierno. In August, the community board assigned an area of 2000 m2 and granted a loan of 10 000 soles for the committee to install infrastructure for a mini sawmill. This was possible thanks to the capacity building in organizational skills and facilitation of agreements made by the members of this committee.
2. Through coordination with the Dirección General Forestal y de Fauna Silvestre (DGFFS), they incorporated the TOR format for harvesting Ungurahui we developed in the proposed guidelines for the extraction of eight species of palms (irapay, Aguaje, Yarina, Chambira Huasai, Pona, Cashapona, and Huacrapona).
3. We supported activities for natural regeneration and establishment of agroforestry systems in 1.5 hectares in Infierno. The goal is for the community to gradually increase the area in systems that include the following species: Pashaco (*Schizolobium sp*.), Mahogany (*Swietenia macrophylla*), Tornillo (*Cedrelinga catenaeformis*), and Copazu (*Theobroma grandiflorum*).
4. Between June and September, we trained 836 people, including timber producers, forest custodians, professionals, and regional government technicians in topics such as: reduced impact logging, silviculture management, forestry law, carbon plots measurements, and multi-temporal analysis for the development of baseline deforestation in Madre de Dios.
5. We developed four guides and educational materials on climate change for children, by adapting the Rainforest Alliance climate curriculum for training in climate change, forests and REDD+. The work was done with the support of teachers from the school of Infierno and framed in the context of the local education management units (UGELs); the materials are pending validation by the institution. To date we have implemented two workshops with four training modules: principles on climate, carbon cycle, carbon and trees, and forests of Peru. These trainings are intended to reach students from first grade through high school to raise awareness on how climate change can affect ecosystems and human activities.
6. We carried out an exchange visit with the community of Callería in Ucayali. Through this experience a group of six people (three community members from Infierno and three from Tres Islas, 2 women and 4 men) met with community members and community authorities, who explained the processes undertaken for capacity building, marketing, overcoming legal barriers, improving internal processes, and increasing income generation, among others. The experience emphasized the importance of reconstituting the timber, Brazil nut, and ungurahui committee in Tres Islas, and capacity building for forest management in Infierno. The commitments from participants such as the timber committee chairwoman, Juana Payaba, are to restructure the committee and promote sustainable logging activities communally.

5.4.2 Goal 2: A participatory forest monitoring system is established whereby forest and agricultural communities with forested lands can achieve and contribute to monitoring, reporting and verification of greenhouse gas emissions and removals

1. In July the post deforestation biomass inventory was completed. Five forest custodians provided support data on activities such as: location of landmarks and trails, open plots through GPS, height measurement of aerial biomass with a clinometers and soil sampling with soil drills.
2. We finished gathering information for the post deforestation carbon baseline by determining the carbon content of the different land use strata in the community of Infierno. Carbon pools were calculated: above ground biomass, below ground biomass, litter, and organic soil carbon. The stratum includes agriculture - mostly banana and papaya (2403 tons of carbon), pastures (7122 tons of carbon), secondary forest less than 5 years (17384 tons of Carbon), agroforestry (356 tons of carbon), and citrus fruit crops (600 tons of carbon).
3. We quantified the NZDZ project benefits in terms of their carbon sequestration potential focusing on expected impacts in terms of tons of CO2 after 1 year of growth. We expect to sequester 8 tons of CO2 during the life of the project in the Madre de Dios landscape. For more details on the assumptions behind these projections please refer to Annex 1.

5.4.3 Goal 3: Promote lessons learned and key strategies of project activities through capacity building and support to national and regional REDD+ strategy development

1. Since May we provided technical assistance to the Gerencia de Desarrollo Social to reactivate the Safeguards commission of the Bureau of Environmental Services and REDD + in Madre de Dios-MSAR that was static for a year due to the political situation and limited interest by GOREMAD in REDD+. We helped facilitate the development of an updated version of the safeguards commission work plan, and in partnership with the MINAM and DAR conducted a training for fifteen officials of the gerencias of Desarrollo Social and Natural Resources, and members of civil society, on REDD + concepts, safeguards, and development status of the national safeguards system.
2. In July, we provided technical assistance to representatives of FENAMAD and ECA-Amarakaeri to clarify and review concepts on climate change, REDD+, safeguards and REDD + SES standards. Based on their interest in creating a standard for REDD+ indígena (RIA), as a next step we will help them analyze synergies between RIA and REDD + SES standards.
3. We will have a capacity building workshop on safeguards and social and environmental standards for REDD+ in coordination with MINAM and other strategic partners such as the ISU , REDD + SES secretariat, UN REDD+ Ecuador, Conservation International and WWF, in Puerto Maldonado in October 2013. The workshop will feature international participation and have the following objectives: a) increase knowledge of key players in Madre de Dios in climate change, REDD+, safeguards and the use of the "Social and Environmental Standards for REDD+", b) disseminate information on safeguards and social and environmental standards for REDD+ to representatives in Madre de Dios and other regions of Peru with activities associated with REDD+, and c) analyze the practical application of REDD+ SES safeguards and standards in Madre de Dios based on the experience of specific cases in Ecuador, San Martin and Acre in Brazil.

6 SUCCESS STORIES

STRENGTHENING LOCAL CAPACITIES

During 2013, the community of Infierno received training and technical assistance to adopt and implement sustainable forest management practices and establish systems for monitoring, reporting and verifying greenhouse gas emissions.

As a result of our efforts to strengthen Infierno's management capacities, the community established its own local timber committee on its own accord, which has been recognized and supported by the community board of directors (the local town council). The Board assigned the timber committee an area so it could build a sawmill to process cut timber from the community and other communities near El Infierno.

The timber committee also obtained approval of a loan of 10,000 new soles (the Peruvian currency) and a donation of 5,000 new soles, which allowed it to equip the sawmill. Furthermore, with the committee´s own resources, it was able to buy additional equipment. The committee now has the necessary tools to process wood and is providing processing services to their community and neighboring populations as well, thus enabling them to improve the income of 17 families in the area.

Infierno also formed a group of community forest guards (custodians) who are well trained in the use of maps, GPS instruments, compasses, inclinometers, and calipers (used for measuring thickness of tree bark, etc.).

The community decided to strengthen the forest guard group by giving them a motor boat so that they can patrol waterways in the forests without any problems. In addition, the community pays the guards a monthly salary subject to delivery of reports on their activities, as it is well aware of how important it is to monitor forests to protect natural resources and to prevent from the encroachment of outside interests on its territory.

We provided training and support in organizing and strengthening the forest guard group. This assistance was key to securing community recognition of the importance of guarding the forests, and in monitoring the well-being of the timber resources. Finally, the information obtained from patrolling and monitoring work has helped Infierno make decisions regarding the management of its forests and their future.

7 TABLE 1 TARGETS AND ACHIEVEMENTS TABLE

Result/Indicator	Unit	Disaggregation	Year 1		Year 2		Year 3/ Life of Project	
			Target	Actual	Target	Actual	Target	Actual
Indicator 1 Quantity of greenhouse gas (GHG) emissions, measured in metric tons of CO2e, reduced or sequestered as a result of USG assistance**	tons of carbon dioxide equivalent (CO2e) avoided or sequestered	Caquetá	0	0	0	0	347	0
		Napo	0	0	0	0	42	0
		Madre de Dios	0	0	22.114	Pending VCS monitoring report*	47.548	0
		Total	**0**	**0**	**22.114**	**0**	**47.937**	**0**
Indicator 2 Number of climate mitigation and/or REDD+ tools, technologies and methodologies developed, tested and/or adopted as a result of USG	# materials developed, tested, and/or adopted	Caquetá	3	0	4	2	5	0
		Napo	2	2	4	3	7	0
		Madre de Dios	3	0	4	4	6	0
		Total	**8**	**2**	**12**	**9**	**18**	**0**
Indicator 3 Number of hectares of biological significance and/or natural recourses under improved natural resource management as a result of USG assistance	# hectares	Caquetá	7.500	0	16.000	15.951	16.000	0
		Napo	100	0	750	4.891	750	0
		Madre de Dios	250	0	32.449	32.445	32.449	0
		Total	**7.850**	**0**	**49.199**	**53.287**	**49.199**	**0**
Indicator 4 Number of people with increased economic benefits derived from sustainable natural resource management and conservation as a result of USG assistance	# individuals	Caquetá	0	0	0	0	1.080	0
		Napo	0	0	0	0	100	0
		Madre de Dios	0	0	0	0	146	0
		Total	**0**	**0**	**0**	**0**	**1.326**	**0**
Indicator 5 Number of products related to the Andean Amazon generated by the NZDZ partners increased	# products	Caquetá	10	0	15	4	20	0
		Napo	1	0	3	2	8	0
		Madre de Dios	3	0	5	14	6	0
		Total	**14**	**0**	**23**	**20**	**34**	**0**
Indicator 6 Number of	# copies	Caquetá	2.000	0	3.000	5.750	4.000	0

Result/Indicator	Unit	Disaggregation	Year 1		Year 2		Year 3/ Life of Project	
			Target	Actual	Target	Actual	Target	Actual
disseminated copies of product related with the Andean Amazon generated by the NZDZ partners increased		Napo	100	0	300	0	530	0
		Madre de Dios	225	0	550	0	1.050	0
		Total	**2.325**	**0**	**3.850**	**5.750**	**5.580**	**0**
Indicator 7 Number of person hours of training in natural resources management and/or biodiversity conservation supported by USG assistance	# hours	Caquetá	2.054	210	7.655	1.969	11.276	0
		Napo	1.304	501	2.836	3.018	4.116	0
		Madre de Dios	1.552	207	2.822	4.934	3.798	0
		Total	**4.910**	**918**	**13.313**	**9.921**	**19.190**	**0**
Indicator 8 Number of people receiving USG supported training in natural resources management and/or biodiversity conservation	# individuals	Caquetá	1.036	35	2.139	664	4.116	0
		Napo	84	34	221	336	301	0
		Madre de Dios	540	36	1.033	741	1.428	0
		Total	**1.660**	**105**	**3.393**	**1.741**	**5.845**	**0**
Indicator 9 Number of laws, policies, strategies, plans, agreements, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted, or implemented as a result of USG assistance	# laws, policies, strategies, plans, agreements or regulations proposed, adopted or implemented	Caquetá	0	0	1	1	3	0
		Napo	0	0	1	0	4	0
		Madre de Dios	0	0	1	3	3	0
		Total	**0**	**0**	**3**	**4**	**10**	**0**

* Pending VCS monitoring report: the report has not yet been elaborated, but we expect the report to confirm the target of 22.114 tons of carbon dioxide equivalent (CO2e) avoided or sequestered

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Result/Indicator	Unit	Disaggregation	20 year projection
Indicator 1 Quantity of greenhouse gas (GHG) emissions,	tons of carbon dioxide	Caquetá	19.283

Result/Indicator	Unit	Disaggregation	20 year projection
measured in metric tons of CO2e, reduced or sequestered as a result of USG assistance	equivalent (CO2e) avoided or sequestered	Napo	3.900
		Madre de Dios	1.153.949
		Total	**1.177.132**

8 ACTIVITY TABLE

8.1 Activity Status Summary

TABLE 2: Activity Status Summary		
Activity Information	**Number of Activities**	**Percentage of Total**
Total number of activities in Work Plan	36	100%
Activities not started yet	3	8%
Activities completed	3	8%
Activities on schedule	28	78%
Activities delayed	1	3%
Activities canceled	1	3%

8.2 Tri-national level

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Imple-menter	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
TRI2.1	Produce a comprehensive 'lessons learned' publication on development and harmonization of community-based monitoring protocols for the Andean Amazon, which analyzes project experience on issues such as: establishment of minimum criteria for harmonization; common methodological development processes, alignment with government programs, and challenges in implementation, amongst others.	RA	Aider, Condesan, FN	FY 14 Q 3	FY 14 Q 4		40%		
TRI3.1	Produce periodic policy briefs to support regional policy interventions, resulting in publication of summary "lessons learned on incorporating and upscaling sustainable land management in REDD+ policy" report	RA	Aider, Condesan, FN	FY 13 Q 1	FY 14 Q 4		50%		

8.3 Colombia – Caquetá Landscape

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Implementer	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
C.1.1	Conduct feasibility analyses to identify priority sites for net zero deforestation pilots, resulting in recommended sustainable management systems that will maximize carbon stocks and reduce deforestation/degradation for each	FN	Nestle, CorpoAmazonia, Lacteos del Hogar, Alcaldias, Municipales ASOHECA ACAMAFRUT	FY 12 Q 3	FY 13 Q 1	FY 14 Q 1	89%	Delayed	Field work to complete activity suspended because of agricultural strike and security issues
C1.4	Develop and adjust guidance on sustainable land management including selection of tree species for reforestation, BMP's for cattle grazing lands and quantification of carbon storage potential from pilot activities in participatory fashion.	FN	CorpoAmazonia, SENA, Universidad de la Amazonía	FY 12 Q 4	FY 14 Q 1		46%	On Schedule	
C1.5	Generate opportunities for capacity building at the local and regional level through outreach, trainings and publications of lessons learned through pilots on the concepts of BMP's in agricultural production systems and scale up and replicate to increase number of stakeholders for creating net zero deforestation areas	FN	SENA, SINCHI, CorpoAmazonia	FY 12 Q 4	FY 14 Q 4		34%	On Schedule	

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Implementer	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
C2.1	Develop and implement tools for community and land-owner carbon stock assessment and monitoring of C storage and GHG emission reductions as result of implementing sustainable land management and reducing deforestation	FN	IDEAM, MADS, SINCHI	FY 13 Q 1	FY 14 Q 4		84%	On Schedule	
C2.2	Estimate carbon sequestration potential in 3000 ha of silvopastoral and agricultural systems where BMPs will be implemented. These estimates will be utilized to monitor changes in carbon stocks over the life of project.	FN	IDEAM	FY 13 Q 1	FY 14 Q 4		60%	On Schedule	
C2.3	Monitor flora and fauna to analyze the impact of BMP implementation and the reduction of deforestation on biodiversity	FN		FY 13 Q 3	FY 14 Q 4		12%	On Schedule	

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Implementer	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
C3.1	Provide training to build local capacity of stakeholders to develop and monitoring of conservation strategies under REDD+ processes	FN	MADS, TNC	FY 12 Q 4	FY 14 Q 4		54%	On Schedule	
C3.2	Support the development of REDD+ strategy within government by participating in discussions on policies, laws and regulatory framework necessary for effective REDD+.	FN	MADS, TNC	FY 12 Q 3	FY 14 Q 4		22%	On Schedule	
C3.3	Identification and design of economic incentives models as strategy to promote local government, communities and farmers in applying sustainable land management.	FN		FY 12 Q 3	FY 14 Q 4		33%	On Schedule	

8.4 Ecuador – Napo Landscape

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Imple-menter	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
E1.1	Train community in best management practices for agriculture and forestry	RA	-	FY 12 Q 4	FY 14 Q 3		35%	On Schedule	

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Imple-menter	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
	with focus on REDD +								
E1.2	Improve capacity for adequate territory planning orientated to reduce deforestation and emissions	RA	-	FY 13 Q 1	FY 14 Q 3		0%	On Schedule	
E1.3	Design and implement a model of forestry incentives under government programs in order to promote the adoption of best management practices focused on carbon sequestration, reducing emissions from deforestation and improving livelihoods	RA / Ecolex	-	FY 12 Q 4	FY 14 Q 4		5%	On Schedule	

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Imple-menter	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
E2.1	Develop and test a methodology for the measurement of carbon in aboveground biomass in agroforestry, silvopastoral, agriculture and forestry systems, integrating scientific and participatory methods. The methodology will enable spatial mapping of carbon stocks in biomass. Workshop held to develop the MRV tool with Colombia and Peru	Condesan	-	FY 12 Q 2	FY 13 Q 1		100%	Completed	

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Imple-menter	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
	partners								
E2.2	Identification of minimum harmonization requirements for the quantification of carbon in aboveground biomass, in the 3 intervened landscapes (Ecuador, Perú, Colombia).	Condesan	-	FY 12 Q 2	FY 12 Q 3		100%	Completed	
E2.3	Develop and carry out capacity building activities that involves at least 20 local people in the proposed monitoring activities	Condesan	-	FY 12 Q 4	FY 13 Q 2		100%	Completed	
E2.4	Establish a baseline of carbon stocks in aboveground biomass in 10 pilot farms for each productivity systems at the beginning of the project.	Condesan	-	FY 12 Q 3	FY 14 Q 1		43%	On Schedule	
E2.5	Monitor LUCC activities and their links to forest governance	Condesan	-	FY 14 Q 1	FY 14 Q 4				

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Imple-menter	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
E3.1	Build capacity of local actors through the establishment of dialogue spaces to strengthen governance on climate change and REDD +	RA	-	FY 13 Q 1	FY 14 Q 4		7%	On Schedule	
E3.2	Develop guidelines for low impact forestry to support the forest law of Ecuador, considering the context of REDD +	RA / Ecolex	MAE	FY 13 Q 1	FY 14 Q 2		5%	On Schedule	
E3.3	Analyze contribution of production systems to environmental safeguards system according to government plans, focusing on its applicability and operability	Ecolex / RA	MAE	FY 13 Q 3	FY 14 Q 4		5%	On Schedule	
E3.4	Systematize lessons learned from NZDZ implementation process	RA / Ecolex		FY 14 Q 1	FY 14 Q 4		0%		

8.5 Peru – Madre de Dios Landscape

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Imple-menter	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
P1.1	Technical assistance and capacity building provided to native communities on best management practice to optimize their forest uses	AIDER	AFIMAD, CANDELA, ACCA	FY 12 Q 4	FY 14 Q 4		71%	On Schedule	
P1.2	Implement strategy to raise local community awareness of key aspects of REDD+, and gender issues in REDD+ and forest management by executing the following steps: i) adapt existing curriculum on forests, climate change and REDD+ for Made de Dios context; ii) once adapted, deliver pilot trainings and identify local leaders; train local leaders to deliver curriculum in their communities.	RA	WWF, AFIMAD, AIDER-CPF, MSAR, FENAMAD	FY 12 Q 4	FY 14 Q 4		41%	On Schedule	

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Imple-menter	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
P2.1	Conduct an analysis to adapt or co-develop a MRV system that community producers can implement to monitor GHG emissions changes related to adoption of climate friendly farming practices. The methodology tested in the pilots will demonstrate to regional REDD+ stakeholders a participatory process	AIDER / RA		FY 12 Q 3	FY 14 Q 1		77%	On Schedule	
P2.2	Facilitate and support the implementation of vigilance committees and monitoring in local communities with needs for improved local forest protection	AIDER	SPDA	FY 13 Q 2	FY 14 Q 4		47%	On Schedule	
P2.3	Review existing deforestation baselines for MDD, to better understand if primary threat in pilot zones is from degradation or deforestation, what the re-growth rate is versus the commercial extraction rate, and know clearly what benefit improved management would have in decreasing deforestation threat or enhancing carbon stocks	AIDER		FY 13 Q1	FY 14 Q 4		12%	On Schedule	

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Imple-menter	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
P3.2	Facilitate the inclusion of management plans of producers as part of REDD+ strategies and environmental services (agricultural, livestock, forest concessionaires, licensees from ecotourism) and native communities, located within the Madre de Dios region.	AIDER	WWF.	FY 13 Q 2	FY 14 Q 4		0%	On Schedule	
P3.3	Strengthen the organizational structure of producer organizations and native communities for the election of their representatives, development of assemblies, accountability, and control and monitoring of forest.	RA	AFIMAD	FY 13 Q 2	FY 14 Q 4		50%	On Schedule	
P3.4	Strengthen the capacities of public and private stakeholders to develop project initiatives for the conservation of forests under public financing (e.g. SNIP - Sistema Nacional de Inversion Publica) within the framework of the national climate change strategy in the Madre de Dios; resulting in the development of investment proposals.	AIDER						Canceled	Other organizations are already implementing this activity in the region
P3.5	Present the economic and climate mitigation benefits of best management practices systems (e.g. RAC, FSC) and propose inclusion of these systems under emerging PES/REDD+; 2 analyses/case studies developed and presented. The Rainforest Alliance will	AIDER / RA	Peru Bosques	FY 12 Q 4	FY 14 Q 4		20%	On Schedule	

#	OBJECTIVE / ACTIVITY NAME AND DESCRIPTION	Imple-menter	Coordination with other organizations	Implementation					Brief description of reasons for Delayed or Canceled Activities (25 words or less)
				Starting Date	Original Completion Date	Estimated Completion	% complete	Status	
	actively and consistently engage in the Mesa National REDD+, and in the MDD Mesa REDD, and present this case in those sessions using lessons learned from pilot projects as examples.								
P3.6	Strengthen local and regional government and civil society capacities to understand and support REDD+ activities, with particular emphasis on fostering understanding of new Peruvian forest law and relationship to REDD.	AIDER / RA	GRRNN Madre de Dios; Programa Regional Forestal; DGFFS	FY 13 Q 1	FY 14 Q 4		35%	On Schedule	
P3.7	Technical analysis conducted to facilitate nesting of MDD technical MRV products within subnational and national framework; 1 analysis with recommendations/tools will be developed and presented in REDD+ roundtable meetings.	AIDER	MINAM, GRRNN;MESA REDD NACIONAL	FY 14 Q 1	FY 14 Q 2			Not started yet	
P3.8	Trainings on establishment of social and environmental safeguards systems in the MDD subnational jurisdiction. Work will be conducted in close coordination with the REDD+ SES; local government agencies responsible for REDD+ implementation, will be the target audiences for these trainings.	RA	MINAM, GRRNN;MESA REDD NACIONAL	FY 12 Q 4	FY 14 Q 2		45%	On Schedule	

9 FUNDING LEVEL & FUNDING SOURCES

Expenses October 2012 - September 2013			
Ecuador	**Colombia**	**Perú**	**Total**
189.701,53	232.754,79	264.108,16	686.564,47

Project name	**Project leverage (1 or 2)**	**Funding Source (Name)**	**Funding Source type**	**Funding**			**Project Purpose(s): Stress how they match NZDZ efforts (25 words or less)**
				Duration	**Total Multiyear (US$)**	**US$ in current reporting period (10/2012 - 09/2013)**	
NZDZ	1	AIDER		3 years	323.000,00	205.593,00	
NZDZ	1	ECOLEX	In kind	3 years	10.000,00	0,00	Cartographic information from the catchment area for the project (maps)
NZDZ	1	FUNDACION NATURA	Foundation	3 years	238.000,00	0,00	

10 ANNEX 1 ESTIMATED IMPACTS FOR NZDZ INDICATOR 1

10.1 Overview

Despite initial delays in project implementation the NZDZ partners have made substantial strides in establishing partnerships within their respective project areas and to elaborate detailed work plans that will enhance the ability of small holder farmers to improve their respective operations in a way that will demonstrate promising strategies that reduce or avoid emissions from land use and land use change.

In general, the project attempts to quantify the potential benefits of the NZDZ activities in terms of greenhouse gas emissions when it is possible to do so. Specifically, the project's capacity to estimate avoided emissions is limited to the activities in Peru due to the amount resources and technical challenges involved in doing so. Where estimates of avoided emissions was not possible the consortium has established activities that allow small holders to reliably delimit and monitor areas set for conservation as part of the general land management strategies that are being implemented in each respective country. Although avoided emissions will not be estimated by all NZDZ project activities that is not to discount the conservation impacts imparted by it. The amount of carbon dense forests affected by the NZDZ project will be more clearly known as a result of the project and will be more effectively monitored using georeferenced cover type maps and field inventories.

Many strategies promoted by NZDZ partners in Ecuador, Peru and Colombia will have some quantifiable impacts as a result of promoting different strategies that restore forest cover. These activities are listed in table 2 as "Restoration" but in encompass a range of strategies to restore vegetation for different purposes such as establishing riparian buffers through natural regeneration to establishing agroforests and small scale timber systems. With this in mind it is important to note the impacts claimed by NZDZ rest on a series of assumptions that are subject to change and which will unfold after the financing of the NZDZ project concludes. The projected impacts for Indicator 1 have been created using relatively favorable scenarios regarding future land management, however the consortium fully acknowledges and emphasizes that such potential benefits can be maintained if and only if certain assumptions regarding future land management strategies are maintained, such as continued maintenance of seedlings, low risks of natural and anthropogenic disturbances, as well as complex political, cultural, and economic factors that are impossible to predict. With these caveats in mind the strategies that are currently in motion across the NZDZ project demonstrate an important first step in piloting various practices that promote ecologically sustainable, low-emissions strategies that can contribute to local livelihoods in important ways. See table 1 for projections of avoided deforestation from Peru.

The following tables attempt to quantify these benefits in terms of their carbon sequestration potential. Table 2 focuses on expected impacts in terms of tCO_2 after 1 year of growth (year 3 of the project). The projection is derived from a combination of USAIDs carbon calculator tool (www.afolucarbon.org), which was constructed using geographically specific data pre-sets from each jurisdictional unit in the NZDZ project. The estimated mean annual increments in terms of tCO_2 derived from values projected in Table 3. Table 2 column 3 lists the projected impacts but uses the more conservative value from columns 1 or 2 and selects data from column #2 when the carbon calculator could not produce results due to insufficient geographically specific information. The team estimates 80% effectiveness to account for some degree of mortality, however this number could fluctuate greatly depending on a host of variables. Table 3 lists projected impact at 20 years in terms of tCO_2 based on data provided by each country. In sum, the team expects to sequester 276 tCO_2 during the life of the project.

Table 1 - Estimated avoided emissions from NZDZ activities in Peru, Comunidad Infierno

Disaggregation	**Year 1**		**Year 2 (tCO2)**		**Year 3 (tCO2)**		**Emissions sequestered or avoided, tCO_2 (life of project) tCO2**	**Emissions sequestered or avoided, tCO_2 (20 years) tCO2**
	Target	**Actual**	**Target**	**Actual**	**Target**	**Actual**		
Park Guard Monitoring- 30% of projected avoided emissions			20,783	Pending VCS monitoring report	23,992	Pending VCS monitoring report	44,775	1,151,709
Agroforestry (carbon sequestered)			n/a		negligible due to being young trees		111	2,240
Forest management (avoided degradation)			1,331		1,331		2,662	
Total			**22,114**		**25,323**		**47,548**	**1,153,949**

Table 2 - Estimated 1 year impacts from carbon sequestration activities

Activity	country	ha	1. Carbon calculator 1 year projection at 80% effectiveness	2. MAI from Climate team in terms of CO2 at 80% effectiveness	3. Conservative estimates (lowest of 1 or 2) – tCO2
Agroforestry	Ecuador	35	29	8	8
Plantation	Ecuador	35	n/a	34.4	34.4
Agroforestry	Peru	10	8	50.4	8
Agroforestry	Colombia	36	n/a	58	58
Restoration	Colombia	120	289	713	289
Totals		236	-	864	**276**

Table 3 - Summary of projected impacts in terms of area and emissions removals

Activity	Country	Area (ha)	Emissions sequestered or avoided, tCO_2 (20 years)
Conservation	Ecuador	1283.5	n/a
	Peru	9,281	n/a
	Colombia	659	n/a
	Subtotal	**11,223**	**n/a**
Restoration	Ecuador	75	3,900
	Peru	9.5	1,254
	Colombia	216	19,283
	Subtotal	**300.5**	**24,437**

10.2 Ecuador

Summary

The team in Ecuador has faced many challenges that have been documented over the life of the project that have caused significant delays in project implementation, particularly regarding activities regarding Indicator 1. However, the team has developed a solid partnership with the Wuamaní community in Napo province and has been steadily progressing to develop and execute their NZDZ workplan. After several field visits to Wuamaní the team determined that the reforestation incentives promoted by the Ministry of Agriculture (MAGAP) could serve as a promising vehicle for delivering long-term economic benefits to the communities through a low-emissions development strategy. However the team has only recently completed the first few workshops that introduce the incentive program to community members and se to forge agreements with the Ministry of Agrculture. Currently the team is busy determining the exact number of participants interested in the program, the amount of area potentially occupied by these systems, and their exact specifications. Therefore the estimated impact of these activities, which is inherently speculative, is relying on estimated areas of impact, and biophysical configurations until the exact quantity, area, and configuration of these forest systems is defined.

Carbon sequestration potential

The MAGAP incentive program is designed to promote wood production by smallholders across the country by offering to reimburse a percentage of the expenses to establish these systems. The criteria of these programs differs in the Ecuadorian Amazon by allowing the incentive to be applied to the establishment of agroforestry systems as well. Rainforest Alliance sees this as an opportunity to assist local farmers in the design, implementation, and monitoring of these systems in order to successfully meet the requirements established by MAGAP while also establishing forestry systems that could deliver important livelihood benefits.

The NZDZ project will help catalyze the design and implementation of agroforest and timber systems, however due to the establishment period required by tree-based systems their impact cannot be quantified immediately. Therefore values attributable to Indicator 1 must necessarily be projections that presuppose numerous, typically unpredictable, variables. Nonetheless the team has generated relatively conservative projections of the 20-year impact of these systems in terms of their carbon sequestration potential as summarized in Table 2.

Table 4 - Projected impacts in Ecuador

Activity	Area (ha)	Emissions sequestered or avoided, tCO_2 (20 years)
Conservation	1283.5	n/a

Reforestation	75	3,900

Avoided Emissions potential

The activities in Ecuador did not undertake baseline deforestation analyses and land use tendencies that would enable an estimate of avoided emissions. The persistent cloud cover in the eastern Andean slopes poses a serious challenge for using optical sensors to detect land cover and land cover change. The ICAA program of activities includes a degradation study using RADAR, which potentially solves this technical challenge, however this tool will not be available in time for application to the NZDZ project. However the NZDZ program of activities in Wuamaní includes incentives and work plans that help maintain 1283.5 ha of forest cover currently registered under the SocioBosque incentive program. Although the impact of the project in terms of avoided emissions cannot be quantified given the resources of this project it will be possible to monitor the conservation of these areas in a more robust manner after the project.

10.3 Peru

Summary

The activities implemented by NZDZ partner, AIDER, in Peru primarily focus on improving forest management operations in order to develop forest management and to enhance protection of the totality of the community's forest cover as a means for avoiding future deforestation. The team's activities are focused in Comunidad Infierno, an indigenous community totaling 9518 ha comprised of approximately 160 indigenous families and whose livelihood consists of a blend of agricultural production, eco-tourism, and forestry. In addition there is a 1,531 eco-tourism concession also managed by the community. In Infierno, of the 9,281 ha of forest cover 1022 ha are under forest management by 17 families with support by the NZDZ project and will contribute to a low emissions land use strategy. The remaining forest cover is under enhanced protection through regular park guard patrols that deter unplanned deforestation and report any illegal deforestation promptly.

The avoided emissions estimates from park guard patrols have been estimated based on the annual baseline projections for deforestation developed as part of their validated voluntary REDD project under the VCS standard, which predates NZDZ financing for the periods of 2012-2013. AIDER has also been able to estimate levels of degradation in a without-project scenario as part of their VCS documentation. These estimates suggest that 1,331 tCO_2 of emissions from degradation are being avoided as a result of project activities that are being financed in part through NZDZ. See table 4 for summarized results. Finally AIDER is also promoting the establishment of agroforestry systems to willing participants encompassing over 9.5 ha, however this is a relatively lower impact strategy in terms of Indicator 1.

Table 5 - Project Impacts in Peru

Activity	Area (ha)	Emissions sequestered or avoided, tCO_2 (Year 2)	Emissions sequestered or avoided, tCO_2 (20 years)
Conservation	8,259	20,073	1,151,709
Sustainable forest management	1,022	1,331	Long-term projections not yet available
Restoration	9.5	negligible	1,254

Avoided emissions

For the purposes of this report the potential for avoided emissions has been quantified using annual time-step projections for Comunidad Infierno. The projections of avoided deforestation from 2012-2013 and 2013-2014 have been discounted by 30% in an effort to estimate the contribution of park guard patrols towards preventing deforestation in the forests of Infierno but only projections from 2012-2013 are listed in Table 5. Projections for 2013-2014 are listed in Table 1. Forest management operations are also an important activity for the project. The activities to enhance forest management operations, when done effectively, can serve as a deterrent to complete conversion which would result in a higher emissions scenario. As mentioned previously, this strategy is being implemented on 1022 ha of forest within the Infierno indigenous community managed by 17 families, which is a part of a larger area of forest within the community. AIDER conducted a forest inventory to improve resource management decisions and to promote more accurate carbon accounting. Table 6 shows the different forest strata assessed by AIDER within the entire area occupied by Infierno but excluding stocks in their eco-tourism concession (1,531 ha). The AIDER team estimates that the average carbon stock of forests within Infierno is 144 tC/ha. ..

Table 6 - Estimated carbon content by stratum within Comunidad Infierno

Estratos	Área (ha)	Reservorio aérea (tC/h)	Reservorio subterránea (tC/h)	Carbono total (tnC/h)	Carbono almacenado ($tnCO_2$-e/h)	Carbono almacenado ($tnCO_2$-e/h)
Aguajal mixto	97.41	111.74	38.87	150.62	552.26	53,797.42
Terrazas altas ligeramente disectada	1,904.22	98.82	25.04	123.85	454.13	864,770.31

Estratos	Área (ha)	Reservorio aérea (tC/h)	Reservorio subterránea (tC/h)	Carbono total (tnC/h)	Carbono almacenado ($tnCO_2$-e/h)	Carbono almacenado ($tnCO_2$-e/h)
Terraza Baja con drenaje bueno a moderado	640.96	107.63	28.87	136.50	500.50	320,799.25
Terraza baja con drenaje imperfecto a pobre	4,463.42	129.10	33.64	162.75	596.75	2,663,529.03
Terrazas baja con drenaje muy pobre	643.94	119.04	38.48	157.51	577.55	371,907.57
Total	**7,749.94**					**4,274,803.58**

Source: AIDER

Carbon sequestration potential

Of the 17 families involved in forest management, 8 of those have elected to participate in restoring degraded areas of land with agroforestry systems that will likely encompass approximately 9.5ha (see table 7). Although the exact configuration of these agroforestry systems has not been defined, which makes estimates of their carbon sequestration potential challenging, AIDER has sampled several agroforestry systems and estimates that common relatively mature examples of these systems found in the region average 36 tC/ha of aboveground biomass. A crude 20 year projection assuming relatively optimistic assumptions suggests that this strategy could sequester 342 tC/ha or 1,254 tCO2/ha within aboveground biomass over a 20 year period.

Table 7 - Participants where agroforestry systems are to be implemented in NZDZ Peru

Particpant Name	Activity	Hectares
José Durand	Agroforestería	1
Marco Campana Hualoa	Agroforestería	1.5
Reynaldo Chambi M.	Agroforestería	1
Ernesto Velásquez Amasifuen	Agroforestería	1
Pedro Santos Velásquez A.	Agroforestería	1
Juan Carlos Arimuya	Agroforestería	1
Ramón Flores	Agroforestería	2
César Pérez Barraza	Agroforestería	1
Total		**9.5**

10.4 Colombia

Summary

In many ways the strategies employed by the NZDZ component in Colombia are the most complex. The team is working to pilot improved cattle management activities in 30 farms which encompass a total area of 3087 ha. Activities include experimenting with rotational grazing and more nutritionally balanced, locally grown feed stock to reduce the amount of pressure on remnant forests and improve meat and dairy productivity. The impact these activities have on GHG emissions is not quantified due to the complexity of doing so. However there are several other proposed strategies that are part of improved cattle management where the impact on emissions can more easily be estimated. In general, the project expects to promote the protection and natural regeneration of areas around natural springs, natural regeneration through passive restoration along water bodies and degraded areas, the establishment of silvopastoral and agroforestry systems, and the conservation of existing remnant forests. Table 8 summarizes the projected impacts of the NZDZ component in Colombia by activity type, while Table 9 summarizes project impacts at a more gradual level.

Table 8 - Projected Impacts in Colombia

Activity	Area	Estimated impact over 20 years (tC)	Estimated impact over 20 years (tCO_2)
Total Reforestation	276	5258.4	19282.55
Total Conservation	660		
TOTAL	**936**	**5258.4**	**19282.55**

Table 9 - Summary of impacts by cover type in Colombia

Cover type	Activity	Area (ha)	% cover	% of area under the	Expected area of impact (ha)	Projected Carbon sequestration potential over

				activity type		20 years tC02e
Mature forest	**Conservation**	**223**	7%	100%	223	-
Secondary forest	**Conservation**	**521**	17%	100%	437	-
Degraded secondary forest	**Restoration**	**n/a**	3%	16%	84	13,861
Pastures lots	**Restoration**	**1210**	39%	10%	96	4,873
Abandoned fields	**Restoration**	**1133**	37%	6%	36	548
TOTAL		**3087**	**100%**	**30%**	**876**	**19,283**

Carbon sequestration potential

In general, carbon sequestration is divided into activities that restore cover through passive restoration techniques, and more costly agroforestry systems. Table 8 lists in more detail the conversion scenarios that are expected to be applied to a particular cover type. The assumptions used to project impact must necessarily be made given the relatively long time horizons needed to truly observe the carbon sequestration impact of these activities.

Avoided Emissions Potential

The NZDZ Colombia component does not have sufficient resources to conduct deforestation and land-use change analysis to adequately estimate the amount of avoided emissions that could be expected by the project. However the total amount of forests that have been identified for conservation within the 30 pilot farms is estimated to total 744 ha. Although the amount of avoided emissions cannot be quantified through the NZDZ project, the area of forests that have been designated for conservation as a condition of improved cattle management is expected to represent a meaningful contribution to this strategy.